

DU SERIES

Compact size with smaller footprint, meeting the needs for high pin count (up to 200) applications

- 0.4mm pitch Floating Connector
- Vertical mating



KEL developed the DU Series for application mainly in small devices, such as electronic application devices, consumer electronics equipment, and broadcasting equipment. This series has the industry's smallest contact pitch of 0.4mm as a floating connector. The DU Series is more space-saving than the DY series?the board footprint of its plug and receptacle is reduced by approximately 48 percent and 31 percent, respectively, compared with the DY Series.

The DU Series, as mentioned above, has the industry smallest contact pitch of 0.4mm as a floating connector. The 0.4mm pitch DU Series allows a ± 0.4 mm alignment movement in the XY directions to absorb deviation in the assembly tolerance of a device. Two mounting methods, namely stack-mated type and vertical-mated type, are available. The connector is available with 80, 110, 120, or 200 contacts. The DU Series has a box-shaped mating portion to reduce exposure of the contact portion and prevent foreign substance from entering the connection portion. The DU Series has also adopted the arc-shape contact structure for plug contact portion same as the DY Series to prevent foreign substances from nicking the plug contact portion. This structure also makes it possible to perform pattern wiring on the underside of contact and prevent entry of foreign substances since the terminals are not exposed on the underside of the receptacle.

The effective mating height of the DU Series is 1.2mm. High reliability is assured when the connector is mated. This series uses a contact method called the cantilever contact type. The DU Series can have up to 200 contacts, while the DY Series can have up to 140 contacts. The size of the DU Series product with 200 contacts is very small (40.36mm in the longitudinal direction and 7.5mm in the width direction). The stack height is 7mm or higher.

The DU Series is provided with dust prevention measures. It uses Kapton tape for the receptacle side to enable automatic mounting and provide sealing for the mating port.

Features & Specifications

Features:

- Location error offsets $\pm 0.4\text{mm}$ in the XY direction.
- High reliable design with effective contact displacement of 1.2mm (0.047").
- Connectors in a vertical mating type are currently offered.
*Stacked mating type is under development.
- Saving of mounting footprint by 48% for a plug. 31% for a receptacle, compared to our DY Series (0.5 mm pitch connector).
- Highly reliable contact performance has been achieved by providing box-shaped insulator to protect the contacts.
- Due to that the bottom of receptacle connector is covered with resin, circuit may be printed under the connector.
- Provided with or without an anti-dust tape. (selectable)
- To ensure the suction surface for automatic mounting.(DU1□)

Specifications:

Insulator material	Glass-filled LCP(UL94V-0), Black
Contact material	Copper alloy
Contact plating	Gold over Nickel
Retention clip material	Copper alloy
Retention clip plating	Tin over Nickel
Current rating	0.4A per contact (Limited pins depending on the number of contacts)
Contact resistance	100mΩ max.
Dielectric withstanding voltage	200V AC for 1 minute
Contact resistance	100MΩ max.
Operating temperature	-40°C to +85°C



■ D U series

0.4mm Pitch Floating Connector

Location error offsets $\pm 0.4\text{mm}$

(June, 2018)